## REMARKS

Favorable reconsideration of the application is respectfully requested in light of the amendments and remarks herein.

Upon entry of this amendment, claims 24-47 will be pending. By this amendment, claims 1-23 have been canceled; claim 24 has been amended; and claim 47 has been added. No new matter has been added.

### § 101 Rejection of Claims 1-23

In Section 9 of the Office Action, claims 1-23 stand rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. Claims 1-23 have been canceled.

Accordingly, it is submitted that the rejection of claims 1-23 based upon 35 U.S.C. §101 has been obviated and withdrawal thereof is respectfully requested.

### § 102 Rejection of Claims 1-17, 20-40, and 43-46

In Section 11 of the Office Action, claims 1-17, 20-40, and 43-46 stand rejected under 35 U.S.C. §102(e) as being anticipated by Zinky *et al.* (U.S. Patent No. 6,480,879; hereinafter referred to as "Zinky").

The steps of claim 24, as presented herein, include:

> A computer program, stored in a tangible storage medium, for managing quality of service, the program representing middleware and comprising executable instructions that cause a computer to:
>
> *configure* an application programming interface as a data model describing quality-of-service contracts and quality-of-service adaptation paths as specified by quality-of-service aware mobile multimedia applications using said application programming interface, in order to manage quality-of-service and mobility-aware for managing network connections with other applications,

00313949

> *wherein* a quality-of-service adaptation path defines an adaptation
> policy identifying quality-of-service specifications and allows
> quality-of-service changes, and

> *wherein* said middleware is adapted
> to negotiate with communication peers to generate adaptation paths,
> to measure the actual quality-of-service, and
> to solve any quality-of-service problem by deciding which of the
> possible adaptations to perform.

(emphasis added)

Accordingly, in one aspect of claim 24, the middleware is adapted to negotiate with communication peers to generate adaptation paths, to measure the actual quality-of-service, and to solve any quality-of-service problem by deciding which of the possible adaptations to perform. See *Specification, page 5, lines 1-8; page 6, lines 16-18; and page 35, lines 23-32.*

Although Zinky generally discloses a framework for providing quality-of-service (QoS) requirements, Zinky's requirements are targeting distributed applications using a Remode Procedure Call (RPC) stall communication. By contrast, embodiments of the present invention are targeting distributed multimedia applications where the requirements for QoS differ significantly from QoS requirements proposed by Zinky.

For example, embodiments of the present invention (for which claim 24 is one embodiment) suggest the use of middleware adapted to negotiate with communication peers to generate adaptation paths, to measure the actual QoS, and to solve any QoS problem by deciding which of the possible adaptations to perform. Thus, the API of claim 24 manages the QoS requirements of all applications and implements an overall solution. By contrast, Zinky only allows local adaptations of a single communication entity on an RPC level rather than an application level. Specifically, Zinky fails to teach or suggest the concept of a QoS adaptation

path disclosed in claim 24. Zinky merely indicates that a delegate can change its behavior based on the current active regions of the QoS contract. See *Zinky, column 8, lines 48-56.*

By contrast, the embodiment of claim 24 suggests the use of a QoS adaptation path that defines an adaptation policy identifying QoS specifications and allows QoS changes. Therefore, the adaptation decisions can be made by the middleware, which has the application requirements, and thus, can negotiate with communication peers to generate adaptation paths. The middleware measures the actual quality of service and solves any QoS problems by deciding which of the possible adaptations to perform. Zinky, however, measures QoS parameters and compares them to the QoS regions specified by the application, leaving the adaptation locally to the application.

Based on the foregoing discussion, it is submitted that claim 24 should be allowable over Zinky. Since claims 25-40, and 43-46 depend from claim 24, claims 25-40, and 43-46 should also be allowable over Zinky. Claims 1-23 have been canceled.

Accordingly, it is submitted that the rejection of claims 1-17, 20-40, and 43 – 46 based upon 35 U.S.C. §102(e) has been overcome by the present remarks and withdrawal thereof is respectfully requested.


§ 103 Rejection of Claims 18, 19, 41, and 42

In Section 55 of the Office Action, claims 18, 19, 41, and 42 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Zinky in view of Cardei *et al.* ("Hierarchical Architecture for Real-Time Adaptive Resource Management"; hereinafter referred to as "Cardei").

Based on the foregoing discussion regarding claim 24, and since claims 41, and 42 depend from claim 24, claims 41, and 42 should be allowable over Zinky. Further, since Cardei

00313949

is cited merely for the functionality of downloading plug-ins corresponding to a given version of

a data model which cannot be handled by the application handler unit, it is maintained that Zinky

and Cardei, individually or in combination, fail to teach or suggest all the limitations of claims

41, and 42. Claims 18 and 19 have been canceled.

Accordingly, it is submitted that the rejection of claims 18, 19, 41, and 42 based upon 35

U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully

requested.


Newly-added Claim 47

Based on the foregoing discussion regarding claim 24, and since claim 47 closely

parallels, and recites substantially similar limitations as recited in, claim 24, claim 47 should be

allowable over the cited prior art references.


Conclusion

In view of the foregoing, entry of this amendment, and the allowance of this application

with claims 24-47 are respectfully solicited.


In regard to the claims amended herein and throughout the prosecution of this

application, it is submitted that these claims, as originally presented, are patentably distinct over

the prior art of record, and that these claims were in full compliance with the requirements of 35

U.S.C. §112. Changes that have been made to these claims were not made for the purpose of

patentability within the meaning of 35 U.S.C. §§101, 102, 103 or 112. Rather, these changes

were made simply for clarification and to round out the scope of protection to which Applicant is entitled.
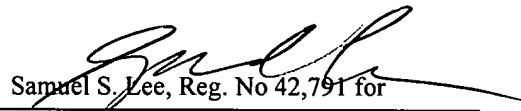
In the event that additional cooperation in this case may be helpful to complete its prosecution, the Examiner is cordially invited to contact Applicant's representative at the telephone number written below.

The Commissioner is hereby authorized to charge any insufficient fees or credit any overpayment associated with the above-identified application to Deposit Account 50-0320.

Respectfully submitted,

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00313949